MFC News

Caring for the Trees and Forests of Mississippi Since 1926

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Inside This Issue:

MFC News is published by the Mississippi Forestry Commission.

Mississippi Facts

- Ten largest Cities In Mississippi in order of size:
  - Jackson
  - Gulfport
  - Biloxi
  - Hattiesburg
  - Southhaven
  - Greenville
  - Meridian
  - Tupelo
  - Olive Branch
  - Clinton
- Average yearly precipitation is 53 inches.
- 32nd in terms of population with 2,984,926 residents (2012).
- 32nd in terms of area with 46,928.27 sq. miles.
- 51.4% of population of Mississippi is female (2011).

Newsletter Deadlines

All submissions are welcome. Photographs are encouraged (although space limitations may curtail inclusion). Items must be received by the ***10th of the month*** to be included in the next month's issue. E-mail submissions *(in Microsoft Word)* and photos to

lharris@mfc.state.ms.us

or mail to:

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Memorial Day History

Memorial Day, originally called Decoration Day, is a day of remembrance for those who have died in our nation's service.

There are many stories as to its actual beginnings, with over two dozen cities and towns laying claim to being the birthplace of Memorial Day. There is also evidence that organized women's groups in the South were decorating graves before the end of the Civil War: a hymn published in 1867, "Kneel Where Our Loves are Sleeping" by Nella L. Sweet carried the dedication "To The Ladies of the South who are Decorating the Graves of the Confederate Dead" (Source: Duke University's Historic American Sheet Music, 1850-1920). While Waterloo N.Y. was officially declared the birthplace of Memorial Day by President Lyndon Johnson in May 1966, it's difficult to prove conclusively the origins of the day. It is more likely that it had many separate beginnings; each of those towns and every planned or spontaneous gathering of people to honor the war dead in the 1860's tapped into the general human need to honor our dead, each contributed honorably to the growing movement that culminated in Gen Logan giving his official proclamation in 1868. It is not important who was the very first, what is important is that Memorial Day was established. Memorial Day is not about division. It is about reconciliation; it is about coming together to honor those who gave their all.

Memorial Day was officially proclaimed on 5 May 1868 by General John Logan, national commander of the Grand Army of the Republic, in his General Order No. 11, and was first observed on 30 May 1868, when flowers were placed on the graves of Union and Confederate soldiers at Arlington National Cemetery. The first state to officially recognize the holiday was New York in 1873. By 1890 it was recognized by all of the northern states. The South refused to acknowledge the day, honoring their dead on separate days until after World War I (when the holiday changed from honoring just those who died fighting in the Civil War to honoring Americans who died fighting in any war). It is now celebrated in almost every State on the last Monday in May (passed by Congress with the National Holiday Act of 1971 (P.L. 90 - 363) to ensure a three day weekend for Federal holidays), though several southern states have an additional separate day for honoring the Confederate war dead: January 19 in Texas, April 26 in Alabama, Florida, Georgia, and Mississippi; May 10 in South Carolina; and June 3 (Jefferson Davis' birthday) in Louisiana and Tennessee.

Traditional observance of Memorial day has diminished over the years. Many Americans nowadays have forgotten the meaning and traditions of Memorial Day. At many cemeteries, the graves of the fallen are increasingly ignored, neglected. Most people no longer remember the proper flag etiquette for the day. While

there are towns and cities that still hold Memorial Day parades, many have not held a parade in decades. Some people think the day is for honoring any and all dead, and not just those fallen in service to our country.

There are a few notable exceptions. Since the late 50's on the Thursday before Memorial Day, the 1,200 soldiers of the 3d U.S. Infantry place small American flags at each of the more than 260,000 gravestones at Arlington National Cemetery. They then patrol 24 hours a day during the weekend to ensure that each flag remains standing. In 1951, the Boy Scouts and Cub Scouts of St. Louis began placing flags on the 150,000 graves at Jefferson Barracks National Cemetery as an annual Good Turn, a practice that continues to this day. More recently, beginning in 1998, on the Saturday before the observed day for Memorial Day, the Boys Scouts and Girl Scouts place a candle at each of approximately 15,300 grave sites of soldiers buried at Fredericksburg and Spotsylvania National Military Park on Marye's Heights (the Luminaria Program). And in 2004, Washington D.C. held its first Memorial Day parade in over 60 years.

To help re-educate and remind Americans of the true meaning of Memorial Day, the "National Moment of Remembrance" resolution was passed on Dec 2000 which asks that at 3 p.m. local time, for all Americans "To voluntarily and informally observe in their own way a Moment of remembrance and respect, pausing from whatever they are doing for a moment of silence or listening to 'Taps."

The Moment of Remembrance is a step in the right direction to returning the meaning back to the day. What is needed is a full return to the original day of observance. Set aside one day out of the year for the nation to get together to remember, reflect and honor those who have given their all in service to their country.

Nation's Rivers and Streams in Poor Condition

EPA Survey Finds More Than Half of the Nation's River and Stream Miles in Poor Condition

WASHINGTON — The U.S. Environmental Protection Agency released the results of the first comprehensive survey looking at the health of thousands of stream and river miles across the country, finding that more than half – 55 percent – are in poor condition for aquatic life.

"The health of our Nation's rivers, lakes, bays and coastal waters depends on the vast network of streams where they begin, and this new science shows that America's streams and rivers are under significant pressure," said Office of Water Acting Assistant Administrator Nancy Stoner. "We must continue to invest in protecting and restoring our nation's streams and rivers as they are vital sources of our drinking water, provide many recreational opportunities, and play a critical role in the economy."

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May's Birthdays

Stanley Burks -1
John Morelan -1
Clayton Thames -1
Melody Amis -2
Larry Stephens -2
Christen Simmons -3
James Black -6
John Ware -7
Edward Williams -7
John Giachelli -8
Jerry Snellings -8
Keith Wooten -10
Charles Bell -13
Charlie Morgan -14
Patrick Parker -14
Michael Burks -15
Kristopher King -16
Brent Ladner -17
Ellis Warren -19
Donald Scarborough -20
Berry Thomas -22
Lyndol Giles -25
Charlie Howell -25
James Phillips -25
David Magee -26
James McCoy -26
Coburn Yelverton -26
Gregory Dixon -28
Shaun Rogers -30
Clifton Sewell -30
Kyle Cumbest -31

And so, my fellow Americans, ask not what your country can do for you; ask what you can do for your country.
~John F. Kennedy

Did You Know?

- 70% of the Earth's Surface is covered in water. About 2.5 % of the Earth's water is freshwater. Less than one percent is in the form of groundwater.
- More than half of the country's drinking water originates in forest. Approximately 180 million people depend on forests for their drinking water
- On average, a mature tree can absorb 36% of the rainfall it comes in contact with.

Tree Knowledge - Who Am I?

My leaves are odd-pinnately compound, alternate, tardily deciduous -persistent. They are 5.0" to 9.0" long with 7 to 0 leaflets. My leaflets are 1.0" to 2.5" long. Their margin is crenate with an acute to long-tapered apex and an unequally rounded to wedge-shaped base. They are bright green above and a paler green below. Their surface is lustrous above and somewhat pubescent below.

My twigs are stout. They are brown in the first season, becoming gray-brown to yellow-brown in the 2nd season. Their surface is brownish pubescence in the 1st season, smooth by the 2nd season. My leaf scars are broadly triangular to heart-sharped. I have three bundle scars armed with straight or curve chestnut brown spines.

My buds are small, obtuse in shape and dark brown to black in color. Their surface is smooth and indistinctly scaly.

My fruit is a wrinkled or roughened capsule. They are 0.25" long and contain a single seed. They are ovoid to nearly globular in shape and brown in color.

My flower is dioecious in terminal cymose cluster. It has 5 petals and light green in color.

My bark is light gray, conical with corky ridges.

I form a single stem. I reach 40 feet at maturely. I have a moderate growth rate and reach 40 feet by age twenty. I have a moderate life span of greater than fifty years.

I am moderate tolerant to fire and shade but have a low tolerant to drought.

I am found in sandy soils near the coast, near streams in low fertile valleys and along riverbanks in association with other hardwoods.

I prefer a soil texture of fine to medium and a soil pH of 5.0 to 8.0.

I range along the Atlantic Coastal Plain, Virginia, west to Texas, and north to Arkansas. The NRCS Plant Database also includes Oklahoma.

I provide moderate palatability for browse animals, my seed are eaten by carnivorous birds. My flowers attracts butterflies. I am a larval host and/or nectar source for the Giant Swallowtail butterfly.

I have not commercial timber value. I am rated high as fuelwood.

I an not generally thought of as an ornamental although I have an aromatic, showy flowers.

Big Hint!!! Chewing my bark or leaves produces numbness of the mouth and tongue, thus reducing the pain of -----. My bark contains an analgesic.

Who Am I?

Tree Knowledge - Who Am I? for April 2013 was the Carolina Basswood *(Tilia Americana L. var. caroliniana (P. Mill.))* Check out page 253 in the Mississippi Trees book.

2012 Harvest of Forest Products

From Mississippi State University Extension Service, MTN-28c - 2012 Harvest of Forest Products Forest Economics, February 2013.

The Mississippi forest industry harvested and delivered $1.018 billion worth of forest products to mills and other processors in 2012. The forest industry in Mississippi and the harvest volumes in this report include all producers and harvesters of forest products paying a timber severance tax collected by the Mississippi Department of Revenue. The total estimated value of the 2012 Mississippi timber harvest delivered to the point of first processing (such as a pulpwood yard or sawmill) was $1,018,319,561. The estimated volume and value of the 2012 timber harvest by product is presented in Table 1. The 2012 harvest value is 6.4% higher than the 2011 value. This increase in harvest value is mostly attributable to a combination of higher harvest volumes for pine sawlogs and pine and hardwood pulpwood. The 2012 average pine sawlog product prices were lower as compared with 2011; however, total pine sawlog delivered value was higher in 2012 than 2011 because of the proportionately higher gain in harvest volume. Timber was the third most valuable agricultural commodity in 2012. Poultry and eggs were the most valuable at $2.53 billion. Soybeans were second at $1.16 billion. Timber ranked at a very unusual third at $1.018 billion. Timber typically ranks first or second. Mississippi's forest landowners collected $469.5 million for their standing timber in 2012, an increase of 8.5% from the previous year. The estimated value of the harvesting and transportation sector2, which is the difference between the delivered and standing values, increased 4.4% from the previous year to $547.4 million. The 2012 value of the harvesting and transportation sector accounted for 53.8% of the total harvest value as compared with 54.7% of the total harvest value in 2011.

Severance tax collections on forest products were $3,497,775 in 2012, which is 4.5% higher than 2011 collections. Twenty percent of severance tax collections, or about 669,555, were returned to counties where the timber was harvested. Eighty percent, or about $2,798,219, went to the Forest Resource Development Program (FRDP) to provide cost share funds to nonindustrial private forest landowners for reforestation and other forest management practices.

The harvest volume of pine sawlogs increased by 10.8%, and its value increased 6.7%. Pine pulpwood volume increased by 1.3% while the value increased 3.4%. Hardwood sawlog volume fell 3.6%, and its value decreased by 0.5%. Hardwood pulpwood volume increased 2.3%, and its value increased by 16%. Christmas tree harvest increased 10% from the previous year and value increased by 34.8%.

The estimated value of the harvesting and transportation sector accounted for 53.8% of the total harvest value in 2012 amounting to a 1.7% decrease in this proportion over the previous year. This relative decrease in

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Holiday

Memorial Day

Monday, May 27, 2013 (Observed)

Civil War - Approximately 620,000 Americans died. The Union lost almost 365,000 troops and the Confederacy about 260,000. More than half these deaths were caused by disease.

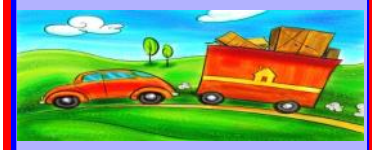
For love of country they accepted death.

–

James A. Garfield

Personnel Personals

- Glen Cooper, Forest Ranger, Forrest County, Southeast District
- Christen Simmons, Forester, FIA, Statewide
- Benjamin Jenkins, Forestry Technician, Rankin County, Capital District
- John S. Stark, Forest Ranger, Tallahatchie County, Northwest



Moving On

- Terry Smith, Forest Ranger, South Central District
- Glen Cooper, Forest Ranger, Forrest County, Southeast District
- Eric Smith, Forest Ranger, Wilkinson County, Southwest District

MSU Summer Camp

The 2013 Natural Resources Summer Camp at MSU is scheduled for June 9-13, 2013. This camp is open to youth ages 14-18. Recently graduated high school students who are interested in natural resources career may also attend.

Hands-on activities and instructional sessions may cover ornithology, waterfowl identification and calling, retriever demonstrations, wildlife pathology, forest products manufacturing, timber measurement, forest management, law enforcement, electroshocking, conservation current events, service learning, natural resources-based careers and much more.

Participants get to experience life on a college campus by staying in the dorms, eating in the cafeteria, learning in college labs, and experiencing recreational facilities. Off-site field trips to the Sam D. Hamilton Noxubee National Wildlife Refuge and Tombigbee National Forest are also planned. Not to mention cool, educational stuff that participants get to take home and use after the camp ends.

The Natural Resources Summer Camp is sponsored by the MSU College of Forest Resources, Mississippi Department of Environmental Quality and Mississippi Forestry Commission

All this – 5 days and 4 nights of educational fun – for only $300. Registration is available online at www.cfr.msstate.edu/wildlife/conservation_camp/.

For More information, contact Leslie Burger at (662) 325-6686 or email.

"A hero is someone who has given his or her life to something bigger than oneself." Joseph Campbell

Forest Health Notes #63

Beech Bark Disease

By Nathan A. Blount and John J. Riggins.

Introduction

The beech scale (*Cryptococcus fagisuga* Lind) is an exotic forest pest first introduced to the United States in the 1930s. Initial infestations were confined to northeastern states, however beech scales have spread southward to other states (Fig. 1), including the eastern half of Tennessee (Hale et al. 2006). Beech scales attack the bark of American beech trees (*Fagus grandifolia)*, weakening tree defenses and potentially allowing three species of fungi (*Nectria* spp.) to invade the tree (McCullough et al. 2005). These fungi can harm the tree, leading to what is known as beech bark disease. Beech bark disease is not present until *Nectria* fungi invade. The disease has killed large amounts of beech trees in the eastern United States, including as much as 50 percent of mature American beech trees in northern Pennsylvania (McCullough et al. 2005). Although not yet documented in Mississippi, the American beech is a fairly common tree in areas of our state so there is reason for concern.

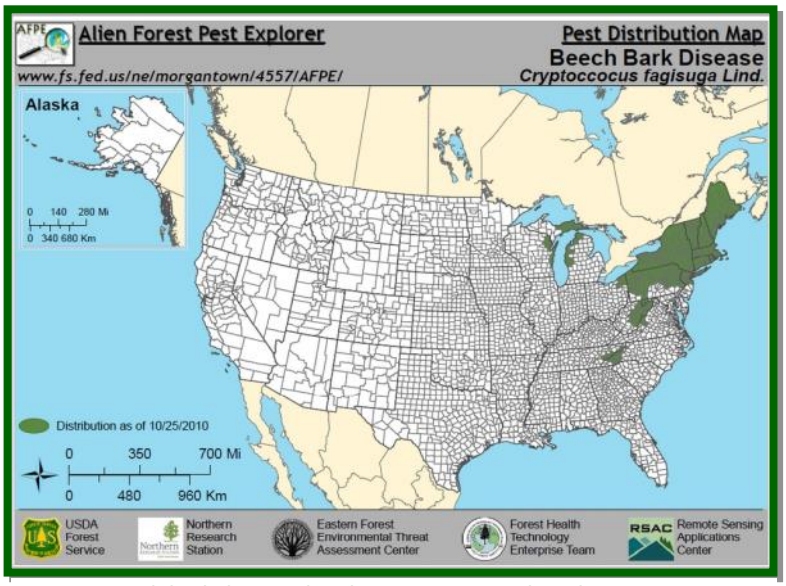


Figure 1: Beech bark disease distribution map. Map by: Alien Forest Pest Explorer, Andrew Liebhold and Laura Blackburn, www.fs.fed.us/ne/morgantown/4557/AFPE/.

The Beech Scale

Beech scales are small, yellowish oval-shaped insects approximately 1/16 of an inch long (Fig. 2, page 12) with a white waxy substance covering the body of adults (Fig. 3, page 12). Beech scales are parthenogenic, meaning they can reproduce without mating which allows populations to escalate quickly on suitable hosts (Hale et al. 2006). Rough areas of bark around the trunks of trees are the preferred feeding sites for beech scales where they feast on fluids underneath the bark. Mass feeding by beech scales weakens trees, but it is the *Nectria* fungi that leads to beech bark disease, which may appear as late as 3-6 years after initial beech scale infestations (McCullough et al. 2005).

Signs and Symptoms

The first sign of beech bark disease is the appearance of a white-wax like substance on the bark of trees (Fig. 4, page 13), which is secreted by the beech scales (Houston and O'Brien 1998). The *Nectria* fungi produce red fruiting bodies that are also sometimes visible on infected trees (McCullough et al. 2005). Symptoms of beech bark disease include reddish-brown dead spots or 'cankers' which may ooze fluid (Fig. 5, page 13), canopy thinning, limb die-back, and tree mortality. Mortality ultimately depends on the amount of tissue killed by the fungi (Hale et al. 2006). Some trees succumb quickly while others may live on for years. Trees that survive *Nectria* invasions are often weak, deformed and slower growing than non-infected trees. These surviving trees are also more susceptible to wind damage and damage from other forest insects and pathogens (Houston and O'Brien 1998).

Susceptibility and Treatment

Stands most susceptible to beech bark disease are those with a high percentage of beech in the overstory (50% or more). Large trees

Mississippi Firewise

What is Firewise In Mississippi?

Firewise is an educational program for homeowners and community leaders. This program is for anyone living in, or connected to, the Wildland Urban Interface. Information is available on how to design, construct, landscape, and maintain home or community so as to withstand a wildfire without the aid of firefighting resources on scene.

What is Wildland Urban Interface? Do I live in one?

A Wildland Urban Interface (WUI) is defined as areas where homes are built near or among lands prone to wildland fire. The WUI is not a place, per se, but a set of conditions that can exist in nearly every community. It can be a major subdivision or it can be four home on an open range. WUI are found in every part of the country where people live in areas with vegetation near homes and little clearance around the home.

According to the national Fire Protection Association (NFPA), WUI is where conditions include (but are not limited to) the amount, type, and distribution of vegetation; the flammability of the structures (homes, businesses, outbuilding, decks, fences, etc.) in the area and their proximity to fire-prone vegetation and to other combustible structures; weather patterns and general climate conditions; topography; hydrology; average lot size and road construction.

So yes, you live in a Wildland Urban Interface.

What Can I Do?

Firewise principles are based on NFPA guidelines. Following these guidelines can help reduce the risk of losing your home to wildfire.

* Use fire resistant materials when building new structures or when retrofitting your home. Use fire proof screens and vents on all opening.
* Create and maintain at least 30 feet of defensible space around your home. Within this 30 feet of defensible space,
    * reduce or remove the vegetation that has a high content of flammable resins, oils or waxes.
    * Remove hazards such as woodpiles on the front porch and prune overhanging tree limbs.
    * Consider the use of fire resistant mulch and consider planting species that have a high moisture content in their leaves.
* Reduce the amount of fuel that will bring a wildfire into your home by mowing the lawn regularly, sweeping the roof and cleaning out the gutters.

Other Things You Can Do... No Cost, Just A Little Time.

* Compost leaves.
* Put a water hose (at least 100 feet long) on a rack and attach it to an outside faucet.
* If you have a burn barrel that you use for burning trash, **STOP**!
* When burning, always have a shovel on hand and hook up the garden hose BEFORE you start the fire.
* Never burn if smoke and flames are blowing toward your home or your neighbor's home.
* Talk to your children about fire and matches.

For more tips on Firewise things you can do to protect your home and property, check out our Firewise pages at http://www.mfc.ms.gov/firewise.php.

Are there Firewise Classes Available?

Yes, Firewise Workshops are free events that are sponsored by the MFC and their partners. You must pre-register for these events so that you can receive refreshments and workshop materials. A listing of available Firewise Workshops are available on our website at http://www.mfc.ms.gov/firewise.php under the heading of Scheduled Workshops.

Are you ready for the question? The question is... Is your home and property Firewise?

50th Annual Teachers Conservation Workshop *"TWC"*

The Teachers Conservation Workshop, which we affectionately call "TCW" is a practical, hands-on conservation workshop with emphasis on forests and other natural resources. The latest information on conservation is presented in the classroom and in numerous field trips including industries, harvesting operations, management practices, and nature trails. Participants learn by demonstration and practical exercises how relevant conservation practices can be integrated into classroom work and student projects.

Instructors include professionals from Miss. State University, Miss. Forestry Commission, Natural Resources Conservation Service, Miss. Department of Wildlife, Fisheries, and Parks, U.S. Forest Service, forest industries, consulting foresters and many other natural resource organizations and companies. Participants will be certified to use teaching materials of the nationally acclaimed, award-winning environmental education curriculum Project Learning Tree. This is a highly active workshop. Come prepared for forestry field trips, nature walks, and getting in creeks for water studies.
This workshop is sponsored by Teachers Conservation Workshop Committee and the Sustainable Forestry Initiative State Implementation Committee of the Mississippi Forestry Association. For more information, please click here.

2013 Workshop Dates:

- North Mississippi, **June 3-7,** Northeast Community College, Booneville, MS.
- South Mississippi, **June 16-21,** Jones County Junior College, Ellisville, MS.

2012 Harvest of Forest Products

(Continued from page 5)

the harvesting and transportation estimated value reflects a greater year over year increase in standing prices as compared with delivered prices in percentage terms for hardwood pulpwood and pine and oak sawlogs. Fuel prices in 2012 were actually slightly higher than 2011. This relative decrease in the harvesting and transportation estimated value resulted primarily from a 10.8% increase in harvest of pine sawlogs in 2012, a product category where stumpage comprises about 55% of the delivered value and accounts for 41% of the state's total harvest of forest products value. The long awaited beginnings of a recovery in the markets for timber and timber products started to show during 2012, and the prospects for 2013 are positive. The Random Lengths framing lumber composite price for January 2013 is up 42.5 % from last year and up 92.4% from the low point reached in early 2009. These gains reflect increased demand for lumber resulting from sustained improvement in the U.S. housing market. New home construction has improved markedly since 2009, the low point for home construction following the recent recession. Housing construction is up 25.4% from this time last year as of November 2012 and is up 86.2% since the record low set in April 2009 when the seasonally annual adjusted rate (SAAR) for housing starts fell to 477,000 units. Building permits for new home construction are also trending in a positive direction. Permits are up 26.8% over the past year. Lumber futures finished 2012 at an eight-year high with prices for January 2013 lumber delivery reaching their highest level since April 2005, which was near the peak of the housing bubble. Fueling the recent increase in new home construction are sharp declines in both newly constructed and existing home inventories. These are both measured in month supplies and have decreased to lows not seen since prior to the housing bubble collapse. These are all very favorable signs that Mississippi's timber markets should see improvement during 2013 that should intensify into 2014. Recovery efforts in New Jersey and New York from Super Storm Sandy will also help increase demand for building products. A recent housing construction forecast produced by the National Association of Home Builders indicates that U.S. housing starts will reach over 1 million units SAAR by 2014. Thus, the production of lumber and other wood building products will increase over 2013 and will continue into 2014. Demand for pulpwood should also show improvement during 2013 as demand in the pulp market is correlated with GDP growth. Forecasts for GDP growth for the U.S. economy vary, but most favor maintaining growth around 2% over 2013. Demand for paper products used in advertising declined with the recession and had not rebounded well due to increasing use of digital advertising. However, pulping processes that can produce fluff pulp are poised to benefit, and demand for fluff pulp is expected to grow over the next several years. Fluff pulp is used in the manufacture of sanitary paper products such as tissue paper and diapers. Over the next 20 years, the size of the Asia-Pacific middle class in terms of spending is expected to grow from $4.8 to $32.6 trillion. Economic growth in countries with large populations and rapidly increasing economies will spur greater global demand for fluff pulp; that is one market segment for pulpwood that will see greater growth, and Mississippi pulpwood producers will benefit. This is not expected to translate into large price gains for pulpwood but should keep and improve viable markets for Mississippi pulpwood.

For information on current Mississippi timber prices, consult the Mississippi Timber Price Report available at www.msucares.com. Select "Forestry" then "Timber Prices." For more information on timber marketing, harvesting, or prices, contact your local County Extension Service or the Mississippi State University Department of Forestry, Box 9681, Mississippi State, MS 39762.

Table 1. Estimated volumes and values of the 2012 timber harvest.

Product/Unit[1]	Volume	Standing[2] Value($)	Delivered[2] Value($)
Pine Sawlogs, MBF, D	1,248,929	232,224,039	417,171,712
Hardwood Sawlogs[3], MBF, D	236,563	70,740,648	108,885,760
Pine Pulpwood, Cords	4,958,084	108,387,550	337,773,699
Hardwood Pulpwood, Cords	1,562,423	41,473,934	129,197,051
Poles, MBF, D	42,551	15,750,061	22,190,202
Crossties[4], MBF, D	3,844	900,723	1,645,836
Christmas Trees[5], Tree	29,700	**	1,455,300
Total Value		469,476,956	1,018,319,561

[1] Unit abbreviations: MBF = thousand board feet, and D = Doyle log rule.
[2] Standing and delivered values calculated using regional (north and south Mississippi) volumes reported by the Miscellaneous Tax Division of the Mississippi Tax Commission and product prices from sources such as Timber Mart-South.
[3] Composite price for hardwood sawlogs calculated under the assumption that hardwood sawmills cut 70% oak and 30% mixed hardwood.
[4] Crosstie values calculated using standing and delivered values for mixed hardwood sawtimber prices by region.
[5] Christmas trees value and volumes estimated by Mississippi State University Extension Forester Stephen Dicke.
** Not reported since most trees are sold as choose-n-cut.

Nation's Rivers and Streams in Poor Condition

(Continued from page 3)

The 2008-2009 National Rivers and Stream Assessment reflects the most recent data available, and is part of EPA's expanded effort to monitor waterways in the U.S. and gather scientific data on the condition of the Nation's water resources.

EPA partners, including states and tribes, collected data from approximately 2,000 sites across the country. EPA, state and university scientists analyzed the data to determine the extent to which rivers and streams support aquatic life, how major stressors may be affecting them and how conditions are changing over time. Findings of the assessment include:

- Nitrogen and phosphorus are at excessive levels.
- Streams and rivers are at an increased risk due to decreased vegetation cover and increased human disturbance
- Increased bacteria levels
- Increased mercury levels.

EPA plans to use this new data to inform decision making about addressing critical needs around the country for rivers, streams, and other waterbodies. Results are available for a dozen geographic and ecological regions of the country.

More information: http://www.epa.gov/aquaticsurveys

(Continued from page 7)

are also more susceptible to mortality than smaller trees (McCullough et al. 2005). Preventing the introduction of the beech scale into our state is the key in protecting our trees from beech bark disease. This can be accomplished by inspecting beech trees for scales before purchase or planting, and not transporting beech firewood from infected states. Insecticides can be used to control scales on ornamental trees, but trees already heavily infested or showing symptoms of the disease may not benefit from treatment. In forested stands, there is no economically feasible way to control beech scales or beech bark disease but salvage cuttings can help reduce the spread (Houston and O'Brien 1998).

Implications

American beech trees have a long lifespan, can reach large sizes (upwards of 120 feet tall) and provide aesthetic value to a variety of sites, both urban and non-urban. Many animals such as birds, bears, and deer rely on American beech trees for the hard mast they produce. Heavy mortality in beech dominant forest types could cause a shift in species composition, potentially degrading habitat (McCullough et al. 2005). It is important for us to do our part and try to prevent the spread of beech scales so beech bark disease does not devastate Mississippi's American beech trees which would lead to other major changes in our forests.

References

Hale, F., G. Wiggins, P. Lambdin, and J. Grant. 2006. Beech Scale, a Potential Threat in the Landscape. SP503-H. The University of Tennessee Extension.

Houston, D. R. and J. T. O'Brien. 1998. Beech Bark Disease. Forest Insect and Disease Leaflet 75. USDA Forest Service.

McCullough, D.G., R.L. Heyd, and J.G. O'Brien. 2005. Biology and Management of Beech Bark Disease: Michigan's Newest Exotic Forest Pest. Extension Bulletin E

Figure 2: Beech Scale (Cryptococcus fagisuga Lind) nymph. Photograph by: Joseph O'Brien, USDA Forest Service, www.forestryimages.org.

Figure 3: Beech Scale adult with waxy covering. Photograph by: Chris Malumphy, The Food and Environment Research Agency, www.forestryimages.org.

Figure 4: White wax on American beech bark, first sign of beech scale infestation. Photograph by: Joseph O'Brien, USDA Forest Service,

Figure 5: Cankers on stem of an American beech infected with beech bark disease. Photograph by: Linda Haugen, USDA Forest service, www.forestryimages.org.

U. S. War Casualties

Memorial Day originally honored military personnel who died in the Civil War (1861-1865). The holiday now honors those who died in any war while serving with the United States.

U. S. War Casualties:

- Civil War - Approximately 620,000 Americans died. The Union lost almost 365,000 troops and the Confederacy about 260,000. More than half these deaths were caused by disease.
- World War I - 116,516 Americans died, more than half from disease.
- World War II - 405,399 Americans died.
- Korean War - 36,574 Americans died.
- Vietnam Conflict - 58,220 Americans died. More than 47,000 Americans were killed in action and nearly 11,000 died of other causes.
- Operation Desert Shield/ Desert Storm - 148 U.S. battle deaths and 145 non-battle deaths.
- Operation Iraqi Freedom - 4,466 U.S. service members have died.
- Operation New Dawn - 66 U.S. service members have died.
- Operation Enduring Freedom - 2,219 U.S. service members have died as of May 21, 2013.

Safety First . . .

May Is National Electrical Safety Month

NSC designates May as National Electrical Safety Month and partners with the National Electrical Safety Foundation to present topics for public safety awareness of electrical hazards. According to the US Consumer Product Safety Commission, nearly 400 people are killed or injured by electricity each year.

We rely on electricity to light our homes, keep our food hot or cold, run our appliances, charge our phones, and so much more. Electricity, like many things we use so often, is sometimes taken for granted and overlooked as something that could potentially be very hazardous. It's important to know and practice proper safety when it comes to something as deadly as electricity.

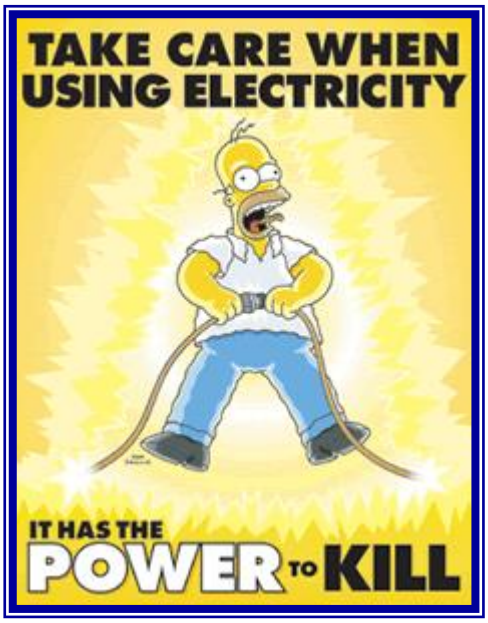
Recognizing Potential Hazards

Certain pieces of equipment are more prone to electrical hazards than others. For example, if you are using generators, extension cords or construction equipment, you should carefully review the safety guidelines before proceeding.

- Never use generators indoors, and always ensure that the main circuit breaker that connects your building to the power grid is turned off.
- Use only extension cords with three prongs to prevent short circuits, overloading and electrocution. Never use a frayed extension cord and always remove cords by pulling from the plug, rather than the cord.
- When using corded power tools, do not stand in wet areas. Do not use power tools in the rain.

Working Near Power Lines

Power lines can be overhead or buried. For overhead power lines, always assume that they are energized and keep 10 feet away at all times. When working near power lines, use nonconductive wood or fiberglass ladders rather than aluminum. Before digging, call the local utility company to ensure that there are no buried power lines. De-energize ground wires before working near them.



One of the most threatening electrical hazards outside of the home is a downed power line. You are unable to turn off the power to these lines and can be killed if you come in contact with them. If you find yourself close to a downed power line, leave the area immediately and call 9-1-1. If a lot of people are around the power line, try to help by letting everyone know they need to stay away.

When Doing Electrical Repairs

Make sure the power is off. Shut off the breakers in the breaker box. To make extra sure, use a tester before touching any wiring. Never touch bare wiring with any part of your body. Use non-conductive shoes and gloves when working with electricity. When working with tools, be sure that the tools are properly insulated and do not have metal handles. Also, be sure to never work on electrical repairs that are in a wet area.

Children and Electrical Safety

Many times, children are not aware of the dangers of electricity. They can sometimes find it intriguing, sparking their curiosity. To prevent children from playing with power outlets, find and purchase outlet covers for any outlets not in use. Also, be sure to teach your children not to play with cords that are occupying outlets. Older kids will also be curious with electrical devices and will sometimes want to open them and take them apart. Teach your children not to do this as even unplugged devices can sometimes hold a current strong enough to cause harm.